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WILMERHALE/BOSTON			EXAMINER	
60 STATE STREET			ONWILL, KARIE AMBER	
BOSTON, MA 02109				
		ART UNIT	PAPER NUMBER	
		1795		
		NOTIFICATION DATE	DELIVERY MODE	
		12/04/2008	ELECTRONIC	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/628,681

Applicant(s)

RILEY ET AL.

Examiner

Karie O'Neill

Art Unit

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 September 2008.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-90 is/are pending in the application.
4a) Of the above claim(s) 22-90 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1, 5-12 and 16-21 is/are rejected.
7) ☒ Claim(s) 2-4 and 13-15 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 28 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 9-18-08
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

1. Applicant's amendment filed on September 4, 2008, was received. Claims 4, 7, 8, 15, 18 and 19 have been amended. Claims 22-90 have been withdrawn from consideration. Therefore, Claims 1-21 are pending in this office action.
2. The text of those sections of Title 35, U.S.C. code not included in this action can be found in the prior Office Action issued on April 4, 2008.

Information Disclosure Statement

3. Information disclosure statement (IDS), submitted September 18, 2008, has been received and considered by the examiner.

Claim Rejections - 35 USC § 102

4. The rejection of Claims 1,5-6, 10, 11-12, 16-17 and 21 under 35 U.S.C. 102(e) as being anticipated by Chiang et al (US 2003/0082446 A1), are maintained. The rejection is repeated below for convenience.

With regard to Claims 1, 11 and 12, Chiang et al. discloses in Figures 3A-3D, a bipolar device (10) having an arbitrary form factor the article comprising: (a) a bipolar structure (10) having an anode (12), a cathode (14) and an electrolyte (16) in contact with and separating the anode and cathode (paragraph 0052), wherein the anode (12) and cathode (14) are interpenetrating (paragraph 0052); (b) a cathode current collector (30) that is in electronic communication with the cathode component (14) (paragraph

0052 and Figure 3); (c) an anode current collector (30) that is in electronic communication with the anode component (12) (paragraph 0052 and Figure 3); wherein the bipolar article as a whole has an overall form that is not cylindrical or prismatic. Chiang et al. discloses the bipolar device being a tailorable or customizable device having structures of reticulated interface that can be tailored for purposes of controlling and optimizing charge and discharge kinetics (paragraph 0053).

With regard to Claims 5 and 16, Chiang et al. discloses wherein the anode, electrolyte and cathode are sequentially deposited (paragraphs 0070- 0071, Prophetic Example 1).

With regard to Claims 6, 10, 17 and 21, Chiang et al. discloses a device comprising the bipolar article, wherein the bipolar article is an energy storage system, including, but not limited to lithium ion batteries (paragraph 0044).

Claim Rejections - 35 USC § 103

5. The rejection of Claims 7-9 and 18-20 under 35 U.S.C. 103(a) as being unpatentable over Chiang et al (US 2003/0082446 A1), as applied to Claims 1, 5-6, 10, 11-12, 16-17 and 21 above, and in further view of Lanni (US 5,949,213), are maintained. The rejection is repeated below for convenience.

Chiang et al. discloses the bipolar article in paragraph 4 above, including the bipolar article being a bipolar device, which can be an energy storage device such as a rechargeable battery, but does not disclose wherein the arbitrary configuration of the bipolar article is conformal with at least one surface of the device, wherein the device

has a cavity, and wherein the arbitrary configuration of the bipolar article is space-filling within the cavity, and wherein the device is a cellular telephone, laptop computer, personal digital assistant, or the like.

Lanni discloses wherein the battery section, or the bipolar article, is installed in a portable appliance such as a notebook personal computer or mobile telephone (column 4 lines 15-18). Because the battery is installed in the portable appliance means that the battery is conformal to at least one surface of the appliance and fills a cavity within the appliance. Therefore, at the time of the invention it would have been obvious to one of ordinary skill in the art to use the battery, or bipolar article, of Chiang et al. in a device such as a personal computer or mobile telephone, because Lanni teaches the battery, or bipolar article, provides power/current to the portable appliances.

Allowable Subject Matter

6. Claims 2-4 and 13-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter: the closest prior art, Chiang et al. (US 2003/0082446 A1), does not teach or fairly suggest wherein the cathode current collector is attractive to the cathode network and repulsive to the anode network, and the anode current collector is attractive to the anode network and repulsive to the cathode network, and wherein one or both of the

anode and cathode current collectors comprises a coating providing a repulsive force between the current collectors and the opposite anode or cathode network.

Response to Arguments

8. Applicant's arguments filed September 4, 2008, have been fully considered but they are not persuasive.

Applicant's principle arguments are:

(a) Applicants assert that "Chiang does not disclose a bipolar article having an overall form that is not cylindrical or prismatic, as claimed, or disclose tailoring or customizing such an article so as to give it an overall form that is not cylindrical or prismatic".

(b) Applicants disagree with the examiner when it is stated that Lanni discloses a battery installed in a portable appliance and that "[b]ecause the battery is installed in the portable appliance means that the battery is conformal to at least one surface of the appliance and fills a cavity within the appliance." (Office Action, page 4). Applicants further assert that "Lanni discloses that the "charging circuitry and battery may be part of a rechargeable battery cartridge disposed within a compartment of a portable electronic device" (Lanni, Abstract). However, the rechargeable battery itself- 8 in FIG. 2 or 18 in FIG. 4 - is not shown or described as "conformal with at least one surface of the device" or "space-filling within [a] cavity" of the device, as claimed".

In response to Applicant's arguments, please consider the following:

(a) Applicant's have not properly shown that the overall structure of Chiang et al. is not cylindrical or prismatic. In paragraph [0054], Chiang et al. states "in the present invention, "reticulated interface" or "interdigitated electrode" refers to a battery 10 that has a structure, such as a positive and/or a negative electrode 12 and 14 each of which can be connectable to a current collector 30 everywhere, including cases where the positive and negative electrodes serve as their own current collector and having a morphology such that the surface exposed is reticulated, having convexities 26 or protrusions 28 and, correspondingly, concavities or indentations, sufficient to produce features with a thickness or width that is less than the maximum thickness or width of each electrode". Therefore, Chiang et al. discloses that the exposed surface has an overall arbitrary form factor that is not necessarily cylindrical or prismatic.

(b) The battery portion of the battery cartridge is located inside of the cartridge housing and, therefore, makes up a part of the cartridge. The cartridge is disposed within a compartment of the portable electronic device and is conformal to at least one surface of the appliance and fills a cavity within the appliance. There is no indication in the claims that the battery cannot be housed within a cartridge and further placed inside of the appliance. The battery cartridge, including the battery portion located inside, still performs the same function as the battery portion alone.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karie O'Neill whose telephone number is (571)272-8614. The examiner can normally be reached on Monday through Friday from 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark Ruthkosky/
Primary Examiner, Art Unit 1795

Karie O'Neill
Examiner
Art Unit 1795

KAO